# RBR
MEASURE THE BLUE PLANET

SMALL TWO-SENSOR LOGGER

COMPACT, ACCURATE, DEPENDABLE

The RBR*duet*^{4} T.D is a compact, lightweight, temperature and pressure logger designed for high-precision oceanographic measurements in demanding environments. It combines exceptional accuracy and resolution with extremely low power consumption, enabling multi-year deployments using any standard AA battery chemistry. Engineered for durability in harsh marine conditions, the RBR*duet*^{4} T.D delivers reliable, long-term performance across a wide range of oceanographic applications.

FEATURES

Long deployments	Compact and lightweight	One AA battery	Up to 32Hz sampling	USB-C download	Infinite memory*
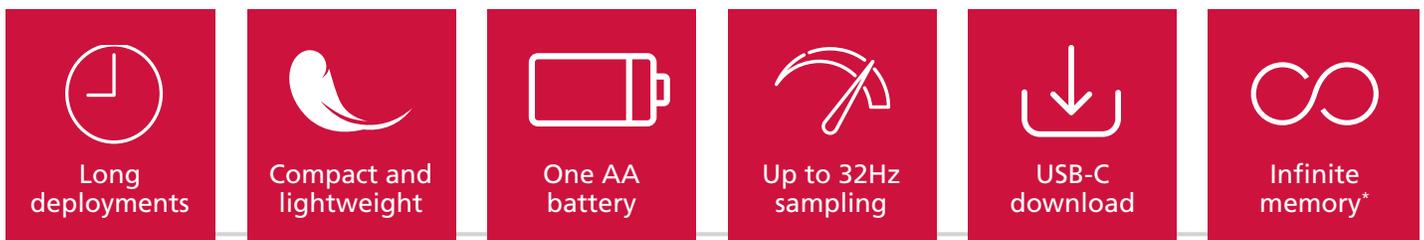
*not really, but we stopped counting at billions of samples.

Available configurations

▶ RBR*duet*^{4} T.D   temperature and pressure; up to 2Hz continuous sampling
▶ RBR*duet*^{4} T.D|fast   temperature and pressure; up to 32Hz continuous sampling
▶ RBR*duet*^{4} T.D|tide32   temperature and pressure; continuous sampling or tidal averaging
▶ RBR*duet*^{4} T.D|wave32   temperature and pressure; continuous sampling, tidal averaging, or wave burst

Variants

▶ RBR*duet*^{4} T.D|deep   temperature; depths up to 10000m
▶ RBR*duet*^{4} T.D|2x   temperature; double the autonomy of RBR*duet*^{4} T.D

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The RBR*duet*⁴ T.D is built for long, accurate field use with low effort. Delivering high accuracy in a compact, field-ready form factor, it combines lab-grade performance with deployment simplicity. USB-C enables fast configuration and data download, while support for standard AA battery chemistry provides global power options. Paired with Ruskin software for intuitive setup and retrieval, the RBR*duet*⁴ T.D is designed for exceptionally long deployments, using RBR's latest ultra-low-power electronics to maximize endurance without compromising precision. Data are stored in RSK format and are accessible using RBR's open Python and MATLAB toolboxes, enabling direct integration into workflows and automated processing pipelines. Ruskin provides Excel exports and publication-ready charts in PNG and PDF formats, ensuring straightforward reporting, analysis, and archiving.

Specifications

Physical

Storage	Infinite memory*
Power	Any AA cell
Communication	USB-C
Clock drift	±60 seconds per year
Depth rating	up to 1700m (plastic)
	up to 10000m (Ti)
Diameter	25.4mm (plastic), 25mm (Ti)
Length	1x cell / 2x cell
	247mm (plastic) / 340mm (plastic)
	278mm (Ti) / 348mm (Ti)
Weight in air	170g (pl) 390g (Ti) / 205g (pl) 485g (Ti)
in water	30g (pl) 255g (Ti) / 30g (pl) 315g (Ti)

*not really, but we stopped counting at billions of samples.

Temperature

Range*	-5°C to 35°C
Initial accuracy	±0.002°C
Resolution	<0.00005°C
Typical stability	±0.002°C / year
Time constant	<0.1s |fast, <1s standard, <15s |slow

*A wider temperature range is available upon request.

Pressure

Range[1]	20 / 100 / 300 / 1000dbar
Accuracy[2]	±0.05% full scale
Resolution	<0.001% full scale
Typical stability	±0.05% full scale / year
Time constant	<10ms

[1]Recommended depth for wave measurements is less than 100m.
[2]±0.01% full scale available is available upon request.

Deployment estimates

RBR*duet*⁴ T.D

Sampling rates	24hr to 1s, and 2Hz		
Autonomy	Speed	Time	# samples
1x cell	5s	713 days	12.3 million
	2Hz	99 days	17.1 million
2x cell	5s	3.9 years	26.4 million
	2Hz	199 days	34.3 million

RBR*duet*⁴ T.D|fast32

Sampling rates	24hr to 1s, and 2Hz, 4Hz, 8Hz, 16Hz, 24Hz, or 32Hz		
Autonomy	Speed	Time	# samples
1x cell	32Hz	14 days	39 million
2x cell	32Hz	28 days	78 million

Deep variant

Explore up to 10km deep with RBR*duet*⁴ T.D|deep

2x variant

Double autonomy with RBR*duet*⁴ T.D|2x

![RBRduet⁴ logger]

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